

SEQUENCE LISTING

<110> Leukotech A/S

<120> Bactericidal, anti-apoptotic, po-inflammatory and anti-inflammatory peptides of heparin binding protein (HBP)

<130> P680 PC00

<160> 613

<170> PatentIn version 3.1

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<213> Homo sapiens

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Gly Val Ser Thr Val Val Leu Gly Ala Tyr Asp Leu Arg Arg Arg Glu
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Arg Gln Ser Arg Gln Thr Phe Ser Ile Ser Ser Met Ser Glu Asn Gly
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Tyr Asp Pro Gln Gln Asn Leu Asn Asp Leu Met Leu Leu Gln Leu Asp
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Arg Glu Ala Asn Leu Thr Ser Ser Val Thr Ile Leu Pro Leu Pro Leu
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Gln Asn Ala Thr Val Glu Ala Gly Thr Arg Cys Gln Val Ala Gly Trp
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Gly Ser Gln Arg Ser Gly Gly Arg Leu Ser Arg Phe Pro Arg Phe Val
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Asn Val Thr Val Thr Pro Glu Asp Gln Cys Arg Pro Asn Asn Val Cys
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SUBSTITUTE SHEET (RULE 26)

Thr Gly Val Leu Thr Arg Arg Gly Gly Ile Cys Asn Gly Asp Gly Gly
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Thr Pro Leu Val Cys Glu Gly Leu Ala His Gly Val Ala Ser Phe Ser
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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Gly Thr Arg Cys

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SUBSTITUTE SHEET (RULE 26)

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Ala Gly Trp Gly

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Asn Asn Val Cys

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Asn Val Cys Thr

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Leu Val Cys Glu

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Val Cys Glu Gly

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<210> 176

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Cys Glu Gly Leu

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SUBSTITUTE SHEET (RULE 26)

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Gly Leu Ala His
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SUBSTITUTE SHEET (RULE 26)

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Gly Val Ala Ser

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Val Ala Ser Phe

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Ala Ser Phe Ser

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Ser Phe Ser Leu

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SUBSTITUTE SHEET (RULE 26)

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Gly Pro Asp Phe
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Pro Asp Phe Phe
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Asp Phe Phe Thr
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SUBSTITUTE SHEET (RULE 26)

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Val Ala Leu Phe
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Ala Leu Phe Arg

SUBSTITUTE SHEET (RULE 26)

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Phe Arg Asp Trp

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Arg Asp Trp Ile

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Asp Trp Ile Asp

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Val Leu Asn Asn
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Leu Asn Asn Pro
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Gly Pro Gly Pro
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Pro Gly Pro Ala
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Gly Gly Arg Lys
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SUBSTITUTE SHEET (RULE 26)

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Gly Arg Lys Ala
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<210> 220

<211> 4

<212> PRT

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<220>

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Arg Lys Ala Arg
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<212> PRT

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Lys Ala Arg Pro
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<210> 222

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<210> 223

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Gly Arg Arg Ala

SUBSTITUTE SHEET (RULE 26)

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Arg Arg Ala Gln

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Arg Ala Gln Pro

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Ala Gln Pro Gln

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Gln Pro Gln Glu

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SUBSTITUTE SHEET (RULE 26)

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Pro Gln Glu Phe
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Gln Glu Phe Pro
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Glu Phe Pro Phe
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Phe Pro Phe Leu
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SUBSTITUTE SHEET (RULE 26)

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Pro Phe Leu Ala

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Gln Gly Arg Pro

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Gly Arg Pro Phe

1

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Arg Pro Phe Cys

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SUBSTITUTE SHEET (RULE 26)

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Pro Phe Cys Ala

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Phe Cys Ala Gly

1

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Cys Ala Gly Ala

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Ala Gly Ala Leu

1

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SUBSTITUTE SHEET (RULE 26)

Gly Ala Leu Val

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Ala Leu Val His

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<210> 242
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Leu Val His Pro

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Val His Pro Arg

1

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His Pro Arg Phe

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SUBSTITUTE SHEET (RULE 26)

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Ser Ile Gln Lys
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Arg Phe Val Leu
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Phe Val Leu Thr
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Val Leu Thr Ala
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SUBSTITUTE SHEET (RULE 26)

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Leu Thr Ala Ala
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Ser Cys Phe Arg
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Cys Phe Arg Gly
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Phe Arg Gly Lys
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SUBSTITUTE SHEET (RULE 26)

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Arg Gly Lys Asn
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Gly Lys Asn Ser
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Lys Asn Ser Gly
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Asn Ser Gly Ser
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SUBSTITUTE SHEET (RULE 26)

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Ser Gly Ser Ala
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Gly Ser Ala Ser
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Ser Ala Ser Val
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Ala Ser Val Val
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SUBSTITUTE SHEET (RULE 26)

Ser Val Val Leu

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Asp Leu Arg Gln

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Leu Arg Gln Gln

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Arg Gln Gln Glu

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Gln Gln Glu Gln

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SUBSTITUTE SHEET (RULE 26)

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Gln Glu Gln Ser
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<210> 267
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Glu Gln Ser Arg
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<210> 268
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Ile Gln Lys Gln
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<210> 269
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Phe Ser Ile Arg
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<210> 270

SUBSTITUTE SHEET (RULE 26)

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Ser Ile Arg Ser
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Ile Arg Ser Ile
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<210> 272
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Arg Ser Ile Ser
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<210> 273
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Ser Ile Ser Gln
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SUBSTITUTE SHEET (RULE 26)

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Ile Ser Gln Asn

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Ser Gln Asn Gly

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<210> 276

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Gln Asn Gly Tyr

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Tyr Asp Pro Arg

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SUBSTITUTE SHEET (RULE 26)

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Asp Pro Arg Gln

1

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Pro Arg Gln Asn

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Arg Gln Asn Leu

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<210> 281

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Leu Asn Asp Val

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<210> 282

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SUBSTITUTE SHEET (RULE 26)

Asn Asp Val Leu

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Asp Val Leu Leu

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Val Leu Leu Leu

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Leu Leu Leu Gln

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Arg Glu Ala Arg

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SUBSTITUTE SHEET (RULE 26)

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Glu Ala Arg Leu
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Ala Arg Leu Thr
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Arg Leu Thr Pro
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Leu Thr Pro Ser
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<210> 291

SUBSTITUTE SHEET (RULE 26)

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Thr Pro Ser Val
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<210> 292
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<220>
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Pro Ser Val Ala
1

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<211> 4
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Ser Val Ala Leu
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<210> 294
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Val Ala Leu Val
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<400> 295

Ala Leu Val Pro

1

<210> 296

<211> 4

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<400> 296

Leu Val Pro Leu

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Val Pro Leu Pro

1

<210> 298

<211> 4

<212> PRT

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<223> Peptide fragment: amino acid residues 108-111 of pHBP

<400> 298

Pro Leu Pro Pro

1

<210> 299

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SUBSTITUTE SHEET (RULE 26)

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Leu Pro Pro Gln
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<223> Peptide fragment: amino acid residues 110-113 of pHBP

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Pro Pro Gln Asn
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<220>

<223> Peptide fragment: amino acid residues 111-114 of pHBP

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Pro Gln Asn Ala
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<211> 4

<212> PRT

<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 112-115 of pHBP

<400> 302

Ala Gly Thr Asn
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<210> 303

<211> 4

<212> PRT

<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 113-116 of pHBP

<400> 303

SUBSTITUTE SHEET (RULE 26)

Gly Thr Asn Cys

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<223> Peptide fragment: amino acid residues 114-117 of pHBP

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Thr Asn Cys Gln

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<210> 305
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<400> 305

Asn Cys Gln Val

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<210> 306
<211> 4
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<223> Peptide fragment: amino acid residues 126-129 of pHBP

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Gly Trp Gly Thr

1

<210> 307
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<223> Peptide fragment: amino acid residues 127-130 of pHBP

<400> 307

Trp Gly Thr Gln

1

SUBSTITUTE SHEET (RULE 26)

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Gly Thr Gln Arg
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<210> 309
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Thr Gln Arg Leu
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<210> 310
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<400> 310

Gln Arg Leu Arg
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<210> 311
<211> 4
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Arg Leu Arg Arg
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Leu Arg Arg Leu
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<400> 313

Arg Arg Leu Phe
1

<210> 314
<211> 4
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<400> 314

Arg Leu Phe Ser
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<210> 315
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<400> 315

Leu Phe Ser Arg
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<210> 316
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SUBSTITUTE SHEET (RULE 26)

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<400> 316

Phe Ser Arg Phe
1

<210> 317
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Phe Pro Arg Val
1

<210> 318
<211> 4
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<400> 318

Pro Arg Val Leu
1

<210> 319
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<400> 319

Arg Val Leu Asn
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<210> 320
<211> 4
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SUBSTITUTE SHEET (RULE 26)

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Val Leu Asn Val
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<210> 321

<211> 4

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<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 143-146 of pHPB

<400> 321

Leu Asn Val Thr
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<210> 322

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<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 146-149 of pHPB

<400> 322

Thr Val Thr Ser
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<210> 323

<211> 4

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<400> 323

Val Thr Ser Asn
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<210> 324

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<400> 324

SUBSTITUTE SHEET (RULE 26)

Thr Ser Asn Pro

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<400> 325

Ser Asn Pro Cys

1

<210> 326
<211> 4
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<220>
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<400> 326

Asn Pro Cys Leu

1

<210> 327
<211> 4
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<400> 327

Pro Cys Leu Pro

1

<210> 328
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Cys Leu Pro Arg

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SUBSTITUTE SHEET (RULE 26)

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<400> 329

Leu Pro Arg Asp
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<210> 330
<211> 4
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<220>
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<400> 330

Pro Arg Asp Met
1

<210> 331
<211> 4
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<220>
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<400> 331

Arg Asp Met Cys
1

<210> 332
<211> 4
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<220>
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<400> 332

Asp Met Cys Ile
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<210> 333
<211> 4

SUBSTITUTE SHEET (RULE 26)

<212> PRT
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<220>
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<400> 333

Met Cys Ile Gly
1

<210> 334
<211> 4
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<220>
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<400> 334

Cys Ile Gly Val
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<210> 335
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<400> 335

Ile Gly Val Phe
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<210> 336
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<400> 336

Gly Val Phe Ser
1

<210> 337
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<400> 337

Val Phe Ser Arg
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<210> 338
<211> 4
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<400> 338

Phe Ser Arg Arg
1

<210> 339
<211> 4
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<220>
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<400> 339

Ser Arg Arg Gly
1

<210> 340
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<220>
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Arg Arg Gly Arg
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SUBSTITUTE SHEET (RULE 26)

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Arg Gly Arg Ile

1

<210> 342

<211> 4

<212> PRT

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<223> Peptide fragment: amino acid residues 166-169 of pHPB

<400> 342

Gly Arg Ile Ser

1

<210> 343

<211> 4

<212> PRT

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<223> Peptide fragment: amino acid residues 167-170 of pHPB

<400> 343

Arg Ile Ser Gln

1

<210> 344

<211> 4

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<223> Peptide fragment: amino acid residues 168-171 of pHPB

<400> 344

Ile Ser Gln Gly

1

<210> 345

<211> 4

<212> PRT

<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 169-172 of pHPB

<400> 345

Ser Gln Gly Asp

SUBSTITUTE SHEET (RULE 26)

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<210> 346
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<212> PRT
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<220>
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<400> 346

Gln Gly Asp Arg

1

<210> 347
<211> 4
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<213> Artificial sequence

<220>
<223> Peptide fragment: amino acid residues 171-174 of pHPB

<400> 347

Gly Asp Arg Gly

1

<210> 348
<211> 4
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Asp Arg Gly Thr

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Arg Gly Thr Pro

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Leu Val Cys Asn
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Val Cys Asn Gly
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Cys Asn Gly Leu
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Asn Gly Leu Ala
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SUBSTITUTE SHEET (RULE 26)

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Gly Leu Ala Gln

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Leu Ala Gln Gly

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Ala Gln Gly Val

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Gln Gly Val Ala

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Ala Ser Phe Leu

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Ser Phe Leu Arg

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Phe Leu Arg Arg

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Gln Lys Gln Gly

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<210> 362

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SUBSTITUTE SHEET (RULE 26)

Arg Arg Arg Phe
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Arg Phe Arg Arg
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Phe Arg Arg Ser
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Arg Arg Ser Ser
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SUBSTITUTE SHEET (RULE 26)

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Arg Ser Ser Gly
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Ser Ser Gly Phe
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Ser Gly Phe Phe
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Gly Phe Phe Thr
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SUBSTITUTE SHEET (RULE 26)

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Lys Gln Gly Arg
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Leu Phe Arg Asn
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Phe Arg Asn Trp
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Arg Asn Trp Ile
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SUBSTITUTE SHEET (RULE 26)

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Asn Trp Ile Asp
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Trp Ile Asp Ser
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Ile Asp Ser Val
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Asp Ser Val Leu
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SUBSTITUTE SHEET (RULE 26)

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Ser Val Leu Asn

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Asn Asn Pro Pro

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Gly Gly Arg Arg

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Gly Arg Arg Ala

1

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<400> 383

SUBSTITUTE SHEET (RULE 26)

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Arg Ala Arg Pro

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Ala Arg Pro His

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Arg Pro His Ala

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Pro His Ala Trp

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SUBSTITUTE SHEET (RULE 26)

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His Ala Trp Pro
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Ala Trp Pro Phe
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Trp Pro Phe Met
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Pro Phe Met Val
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SUBSTITUTE SHEET (RULE 26)

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Phe Met Val Ser
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<210> 393
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Met Val Ser Leu
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Val Ser Leu Gln
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Ser Leu Gln Leu
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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Cys Gly Ala Thr
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<210> 404

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SUBSTITUTE SHEET (RULE 26)

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Ala Thr Leu Ile

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Thr Leu Ile Ala

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Leu Ile Ala Pro

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Ile Ala Pro Asn

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Met Ser Ala Ala
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Ser Ala Ala His
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Ala Ala His Cys
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SUBSTITUTE SHEET (RULE 26)

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Ala His Cys Val

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His Cys Val Ala

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Cys Val Ala Asn

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Val Ala Asn Val

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SUBSTITUTE SHEET (RULE 26)

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Asn Val Asn Val
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Val Asn Val Arg
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SUBSTITUTE SHEET (RULE 26)

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Ala Val Arg Val

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<210> 427

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Val Arg Val Val

1

<210> 428

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Arg Val Val Leu

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<210> 429

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Leu Gly Ala His

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SUBSTITUTE SHEET (RULE 26)

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<210> 431
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Ala His Asn Leu
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<210> 432
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His Asn Leu Ser
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<210> 433
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Asn Leu Ser Arg
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<210> 434
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SUBSTITUTE SHEET (RULE 26)

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Ser Arg Arg Glu
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Arg Glu Pro Thr
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SUBSTITUTE SHEET (RULE 26)

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Glu Pro Thr Arg
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<210> 439
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Pro Thr Arg Gln
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<210> 440
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Thr Arg Gln Val
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Arg Gln Val Phe
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<220>
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SUBSTITUTE SHEET (RULE 26)

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Gln Val Phe Ala
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<210> 443

<211> 4

<212> PRT

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<220>

<223> Peptide fragment: amino acid residues 69-72 of hNLE

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Val Phe Ala Val
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<210> 444

<211> 4

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Phe Ala Val Gln
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<211> 4

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Ala Val Gln Arg
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<220>

<223> Peptide fragment: amino acid residues 72-75 of hNLE

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Val Gln Arg Ile

SUBSTITUTE SHEET (RULE 26)

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Gln Arg Ile Phe
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Arg Ile Phe Glu
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<210> 449
<211> 4
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<220>
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<400> 449

Ile Phe Glu Asp
1

<210> 450
<211> 4
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<220>
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<400> 450

Phe Glu Asp Gly
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SUBSTITUTE SHEET (RULE 26)

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<220>
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Glu Asp Gly Tyr
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<210> 452
<211> 4
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<220>
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<400> 452

Asp Gly Tyr Asp
1

<210> 453
<211> 4
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<220>
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Tyr Asp Pro Val
1

<210> 454
<211> 4
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<220>
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Asp Pro Val Asn
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SUBSTITUTE SHEET (RULE 26)

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<223> Peptide fragment: amino acid residues 82-84 of hNLE

<400> 455

Pro Val Asn Leu

1

<210> 456

<211> 4

<212> PRT

<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 83-86 of hNLE

<400> 456

Val Asn Leu Leu

1

<210> 457

<211> 4

<212> PRT

<213> Artificial sequence

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<223> Peptide fragment: amino acid residues 84-87 of hNLE

<400> 457

Asn Leu Leu Asn

1

<210> 458

<211> 4

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<223> Peptide fragment: amino acid residues 85-88 of hNLE

<400> 458

Leu Leu Asn Asp

1

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SUBSTITUTE SHEET (RULE 26)

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<400> 459

Leu Asn Asp Ile

1

<210> 460

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<400> 460

Asn Asp Ile Val

1

<210> 461

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<213> Artificial sequence

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<400> 461

Asp Ile Val Ile

1

<210> 462

<211> 4

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Ile Val Ile Leu

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<210> 463

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<223> Peptide fragment: amino acid residues 90-93 of hNLE

<400> 463

SUBSTITUTE SHEET (RULE 26)

Val Ile Leu Gln

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Ile Leu Gln Leu

1

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Gln Leu Asn Gly

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Leu Asn Gly Ser

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Ser Ala Thr Ile
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Ala Thr Ile Asn
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SUBSTITUTE SHEET (RULE 26)

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Val Ala Leu Val

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Ala Leu Val Pro

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Leu Val Pro Leu

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<210> 480

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SUBSTITUTE SHEET (RULE 26)

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Arg Arg Leu Gly

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<210> 488

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Arg Leu Gly Asn

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Ala Met Gly Trp

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Met Gly Trp Gly

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Gly Trp Gly Leu

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Trp Gly Leu Leu

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SUBSTITUTE SHEET (RULE 26)

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Gly Leu Leu Gly

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Leu Leu Gly Arg

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Leu Gly Arg Asn

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SUBSTITUTE SHEET (RULE 26)

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Arg Asn Arg Gly

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Asn Arg Gly Ile

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Arg Gly Ile Ala

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Gly Ile Ala Ser

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

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Thr Val Val Thr

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Val Val Thr Ser

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Val Thr Ser Leu

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Thr Ser Leu Cys

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Ser Leu Cys Arg

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Cys Arg Arg Ser

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SUBSTITUTE SHEET (RULE 26)

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Arg Ser Asn Val

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Ser Asn Val Cys

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Val Cys Thr Leu

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Cys Thr Leu Val

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SUBSTITUTE SHEET (RULE 26)

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Gly Arg Ile Ser
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SUBSTITUTE SHEET (RULE 26)

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Gln Gly Asp Ser

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Gly Asp Ser Gly

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Asp Ser Gly Thr

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Ser Gly Thr Pro

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Leu Val Cys Asn

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SUBSTITUTE SHEET (RULE 26)

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Cys Asn Gly Leu
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Asn Gly Leu Ile
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Leu Ile His Gly

SUBSTITUTE SHEET (RULE 26)

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His Gly Ile Ala
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SUBSTITUTE SHEET (RULE 26)

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Arg Gly Gly Cys

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Gly Gly Cys Ala

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<210> 562

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Gly Cys Ala Ser

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Cys Ala Ser Gly

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SUBSTITUTE SHEET (RULE 26)

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Ala Ser Gly Leu

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Ser Gly Leu Tyr

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<210> 566

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Gly Leu Tyr Pro

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<210> 567

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Leu Tyr Pro Asp

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<210> 568

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SUBSTITUTE SHEET (RULE 26)

Tyr Pro Asp Ala

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Pro Asp Ala Phe

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Asp Ala Phe Ala

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Ala Phe Ala Pro

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Phe Ala Pro Val

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SUBSTITUTE SHEET (RULE 26)

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Ala Pro Val Ala
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Pro Val Ala Gln
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Val Ala Gln Phe
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Ala Gln Phe Val
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SUBSTITUTE SHEET (RULE 26)

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Gln Phe Val Asn
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Phe Val Asn Trp
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Val Asn Trp Ile
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Asn Trp Ile Asp
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SUBSTITUTE SHEET (RULE 26)

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Trp Ile Asp Ser

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<223> Peptide fragment: amino acid residues 213-216 of hNLE

<400> 582

Ile Asp Ser Ile

1

<210> 583
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide fragment: amino acid residues 214-217 of hNLE

<400> 583

Asp Ser Ile Ile

1

<210> 584
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide fragment: amino acid residues 214-218 of hNLE

<400> 584

Ser Ile Ile Gln

1

<210> 585
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide fragment: amino acid residues 43-46 of PHBP

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<400> 585

Pro Arg Phe Val

1

<210> 586

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 190-194 of pHPB

<400> 586

Leu Arg Arg Arg

1

<210> 587

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 217-220 of pHPB

<400> 587

Asn Pro Pro Ala

1

<210> 588

<211> 221

<212> PRT

<213> Sus sp.

<400> 588

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20 25 30Pro Arg Phe Val Leu Thr Ala Ala Ser Cys Phe Arg Gly Lys Asn Ser
35 40 45Gly Ser Ala Ser Val Val Leu Gly Ala Tyr Asp Leu Arg Gln Gln Glu
50 55 60

Gln Ser Arg Gln Thr Phe Ser Ile Arg Ser Ile Ser Gln Asn Gly Tyr

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65

70

75

Asp Pro Arg Gln Asn Leu Asn Asp Val Leu Leu Leu Gln Leu Asp Arg
85 90 95

Glu Ala Arg Leu Thr Pro Ser Val Ala Leu Val Pro Leu Pro Pro Gln
100 105 110

Asn Ala Thr Val Glu Ala Gly Thr Asn Cys Gln Val Glu Ala Gly Trp
115 120 125

Gly Thr Gln Arg Leu Arg Arg Leu Phe Ser Arg Phe Pro Arg Val Leu
130 135 140

Asn Val Thr Val Thr Ser Asn Pro Cys Leu Pro Arg Asp Met Cys Ile
145 150 155 160

Gly Val Phe Ser Arg Arg Gly Arg Ile Ser Gln Gly Asp Arg Gly Thr
165 170 175

Pro Leu Val Cys Asn Gly Leu Ala Gln Gly Val Ala Ser Phe Leu Arg
180 185 190

Arg Arg Phe Arg Arg Ser Ser Gly Phe Phe Thr Arg Val Ala Leu Phe
195 200 205

Arg Asn Trp Ile Asp Ser Val Leu Asn Asn Pro Pro Ala
210 215 220

<210> 589
<211> 267
<212> PRT
<213> Homo sapiens

<400> 589

Met Thr Leu Gly Arg Arg Leu Ala Cys Leu Phe Leu Ala Cys Val Leu
1 5 10 15

Pro Ala Leu Leu Leu Gly Gly Thr Ala Leu Ala Ser Glu Ile Val Gly
20 25 30

Gly Arg Arg Ala Arg Pro His Ala Trp Pro Phe Met Val Ser Leu Gln
35 40 45

Leu Arg Gly Gly His Phe Cys Gly Ala Thr Leu Ile Ala Pro Asn Phe

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50

55

60

Val Met Ser Ala Ala His Cys Val Ala Asn Val Asn Val Arg Ala Val
65 70 75 80

Arg Val Val Leu Gly Ala His Asn Leu Ser Arg Arg Glu Pro Thr Arg
85 90 95

Gln Val Phe Ala Val Gln Arg Ile Phe Glu Asn Gly Tyr Asp Pro Val
100 105 110

Asn Leu Leu Asn Asp Ile Val Ile Leu Gln Leu Asn Gly Ser Ala Thr
115 120 125

Ile Asn Ala Asn Val Gln Val Ala Gln Leu Pro Ala Gln Gly Arg Arg
130 135 140

Leu Gly Asn Gly Val Gln Cys Leu Ala Met Gly Trp Gly Leu Leu Gly
145 150 155 160

Arg Asn Arg Gly Ile Ala Ser Val Leu Gln Glu Leu Asn Val Thr Val
165 170 175

Val Thr Ser Leu Cys Arg Arg Ser Asn Val Cys Thr Leu Val Arg Gly
180 185 190

Arg Gln Ala Gly Val Cys Phe Gly Asp Ser Gly Ser Pro Leu Val Cys
195 200 205

Asn Gly Leu Ile His Gly Ile Ala Ser Phe Val Arg Gly Gly Cys Ala
210 215 220

Ser Gly Leu Tyr Pro Asp Ala Phe Ala Pro Val Ala Gln Phe Val Asn
225 230 235 240

Trp Ile Asp Ser Ile Ile Gln Arg Ser Glu Asp Asn Pro Cys Pro His
245 250 255

Pro Arg Asp Pro Asp Pro Ala Ser Arg Thr His
260 265

<210> 590
<211> 678
<212> DNA
<213> Homo sapiens

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<400> 590
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 agctgcttcc aaagccagaa ccccggggtt agcaccgtgg tgctgggtgc ctatgacctg 180
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 tacgaccccc agcagaacct gaacgacctg atgctgcttc agctggaccg tgaggccaac 300
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 tgcgagggcc tggcccaagg cgtggcctcc ttttccctgg ggcctgtgg ccgaggccct 600
 gactttctca cccgagtggc gctcttccga gactggatcg atggcgtttt aaacaatccg 660
 ggaccggggc cagcctag 678

<210> 591
 <211> 660
 <212> DNA
 <213> Sus. sp.

<400> 591
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 agctgcttcc gtggcaagaa cagcggagt gcctctgtgg tgctgggggc ctatgacctg 180
 aggcagcagg agcagtcccg gcagcattct ccatcaggag catcagccag aacggctatg 240
 ayccccggca gaatctgaac gatgtgctgc tgctgcagct ggaccgtgag gccgactcac 300
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 ggtgctcaat gtcaccgtga cctcaaacc gtgtctcccc agagcatgtg cattggtgtc 480
 ttcagccgcc gggggccgat cagccaggga gacagaggca cccccctcgt ctgcaacggc 540
 ctggcgaggc gcgtggcctc cttoctccgg aggcgtttcc gcaggagctc cggcttcttc 600
 acccgctggg cgtctctcag aaattggatt gattcagtto tcaacaacc gccggcctga 660

<210> 592
 <211> 750
 <212> DNA

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<213> Homo sapiens

<400> 592

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atgtccgctg cacactgcgt agcaaacgtt aacgttcgtg cggcgctgtg ggttctgggt      180
gtccataacc tgtctcgtcg agaaccgacc cgtcaagtgt tcgccgtgca gcgcattctc      240
gaaaacggct acgaccgggt taacctgctg aacgacatcg tgattctgca actgaacgga      300
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ggaaacggag tacaatgcct ggctatgggt tggggcctgc tcggccgtaa ccgtgggtatc      420
gctagcgctt tgcaagaact gaacgtgacc gtggttacct ccctgtgtcg acgctctaac      480
gtatgcactc tgggtgcgctg ccgccaggct ggcgtttggt tcggtgactc cggtagcccg      540
ctggttttga acggtctgat ccattggtatt gcctccttcg ttcgtggtgg ttgcgcctct      600
ggcctgtacc cggatgcatt tgccccgggt gcacagtttg ttaactggat cgactctatc      660
attcagagat ccgaagacaa cccgtgtccg caccacagtg atccagatcc ggccctccaga      720
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<210> 593

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of pHBP

<400> 593

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Lys Gln Gly Arg Pro Phe Cys Ala Gly Ala Leu Val His Pro Arg Phe
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Val Leu Thr Ala Ala Ser Cys Phe Arg
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<210> 594

<211> 78

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 96-173 of pHBP

<400> 594

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Arg Glu Ala Arg Leu Thr Pro Ser Val Ala Leu Val Pro Leu Pro Pro

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<212> PRT
<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of hHBP with mutations N20K,A33P,Q44R

<400> 597

Lys Gln Gly Arg His Phe Cys Gly Gly Ala Leu Ile His Pro Arg Phe
1 5 10 15

Val Met Thr Ala Ala Ser Cys Phe Arg
20 25

<210> 598
<211> 25
<212> PRT
<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of hHBP with mutations N20K,H24P,A33P,Q44R

<400> 598

Lys Gln Gly Arg Pro Phe Cys Gly Gly Ala Leu Ile His Pro Arg Phe
1 5 10 15

Val Met Thr Ala Ala Ser Cys Phe Arg
20 25

<210> 599
<211> 25
<212> PRT
<213> Artificial sequence

<220>

<223> Reversed sequence: amino acid residues 20-44 of pHBP.

<400> 599

Arg Phe Cys Ser Ala Ala Thr Leu Val Phe Arg Pro His Val Leu Ala
1 5 10 15

Gly Ala Cys Phe Pro Arg Gly Gln Lys
20 25

<210> 600
<211> 25
<212> PRT
<213> Artificial sequence

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<220>

<223> Peptide fragment: amino acid residues 20-44 of pHPB with mutation K20N

<400> 600

Asn Gln Gly Arg Pro Phe Cys Ala Gly Ala Leu Val His Pro Arg Phe
1 5 10 15

Val Leu Thr Ala Ala Ser Cys Phe Arg
20 25

<210> 601

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of pHPB with mutation R44Q

<400> 601

Lys Gln Gly Arg Pro Phe Cys Ala Gly Ala Leu Val His Pro Arg Phe
1 5 10 15

Val Leu Thr Ala Ala Ser Cys Phe Gln
20 25

<210> 602

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of pHPB with mutations K20N,R44Q

<400> 602

Asn Gln Gly Arg Pro Phe Cys Ala Gly Ala Leu Val His Pro Arg Phe
1 5 10 15

Val Leu Thr Ala Ala Ser Cys Phe Gln
20 25

<210> 603

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of pHPB with

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mutation R34Q

<400> 603

Lys Gln Gly Arg Pro Phe Cys Ala Gly Ala Leu Val His Pro Gln Phe
1 5 10 15

Val Leu Thr Ala Ala Ser Cys Phe Arg
20 25

<210> 604

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment consisting of amino acid residues 20-44 of human neutrophil elastase

<400> 604

Leu Arg Gly Gly His Phe Cys Gly Ala Thr Leu Ile Ala Pro Asn Phe
1 5 10 15

Val Met Ser Ala Ala His Cys Val Ala
20 25

<210> 605

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment consisting of amino acid residues 20-44 of murine neutrophil elastase

<400> 605

Arg Arg Gly Gly His Phe Cys Gly Ala Thr Leu Ile Ala Arg Asn Phe
1 5 10 15

Val Met Ser Ala Val His Cys Val Asn
20 25

<210> 606

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide fragment: amino acid residues 20-44 of A. gambiae EAA01962

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<400> 606

Arg Ser Arg Glu Tyr Arg Cys Gly Gly Thr Leu Val Ser Gln Arg Tyr
1 5 10 15

Ile Leu Thr Ala Ala Ser Cys Ala Ala
20 25

<210> 607

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> R1 amino acid sequence (claim 2)

<400> 607

Lys Gln Gly Arg Pro
1 5

<210> 608

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> R1 amino acid sequence (claim 2)

<400> 608

Lys Gln Gly Lys Pro
1 5

<210> 609

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> R1 amino acid sequence (claim 2)

<400> 609

Arg Gln Gly Arg Pro
1 5

<210> 610

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> R1 amino acid sequence (claim 2)

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<400> 610

Arg Gln Gly Lys Pro
1 5

<210> 611
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> R1 amino acid sequence (claim 2)

<400> 611

Asn Gln Gly Arg His
1 5

<210> 612
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> R1 amino acid sequence (claim 2)

<400> 612

Asn Gln Gly Lys His
1 5

<210> 613
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> R19 amino acid sequences (claim 21)

<400> 613

Pro Arg Gly Gln Lys
1 5